



USDA Forest Service - Savannah River

Fiscal Year 2003

Operating under an interagency agreement with the United States Department of Energy-Savannah River (DOE-SR), the United States Department of Agriculture Forest Service-Savannah River (USFS-SR) manages the natural resources at the Savannah River Site (SRS). In support of the SRS stewardship mission, USFS-SR follows these SRS Strategic Plan goals and objectives to implement the SRS Natural Resource Management Plan:

ES2.1.2 Reduce life cycle costs of environmental cleanup by deploying more efficient, innovative technologies

To assist in waste management closure, USFS-SR provided engineering designs, construction and contract administration requested by DOE-SR. We designed a water intake structure and installed an evaporator at the Mixed Waste Management Facility (MWMF). USFS-SR provided monitoring, daily operations, and maintenance of the phytoremediation system.

ES2.1.4 Continue to deploy monitoring and control mechanisms to reduce the potential movement of contaminants offsite

USFS-SR mitigated non-point source pollution and provided direct and indirect assistance to site Environmental Restoration programs. Our efforts exceeded the targets: 162 acres of critical erosion stabilized, and 2,731 acres maintained in fiscal year 2003. Estimated targets for the year were 50 acres and 1,000 acres, respectively.

ES3.1.1 Operate existing facilities such that tritium discharges are as far below regulatory limits as reasonably achievable.

USFS-SR continued operations and maintenance at the MWMF Southwest Plume, where approximately 10 million gallons of tritiated water were irrigated.

We also constructed the MWMF Southwest Plume stormwater reroute system. This system rerouted approximately 10 million gallons of stormwater, thereby increasing the efficiency of the project.





ES4.1.2 Maintain outreach and education programs to contribute to improve science education and stakeholder involvement

USFS-SR participated in SRS internal and external planning and communications, including Citizens Advisory Board meetings, the SRS Deer Hunt Stakeholder Meeting, and the SRS Partnership Council meetings. USFS-SR also presented mission-related messages through 13 news releases, the SRS Safety Conference, Central Savannah River Area conservation education activities, including the CSRA Earth Day, and Smokey Bear's fire prevention program. These efforts, combined with parades and school presentations, reached almost 18,000 individuals.

We provided education program oversight for 132 student-enrollments in 8 summer courses through the Savannah River Environmental Sciences Field Station. Students were predominately from Historically Black Colleges and Universities.



We also provided oversight of the Natural Resources Science, Mathematics, and Engineering Education Program (NRSMEEP) for third-through-twelfth grade students and teachers in the Central Savannah River Area. NRSMEEP provided hands-on instruction via 4,282 student visits and conducted six teacher workshops. More than one-half of the participants were ethnic minority students.



USFS-SR also supported environmental science education in the CSRA and the South Carolina "lowcountry" in partnership with the State Department of Education.

ES4.1.4 Ensure commitment to National Environmental Research Park (NERP) status by continued maintenance of the DOE Research Set-Aside Program as well as research and evaluation of the effects of human activities on the environment

USFS-SR promoted SRS as a National Environmental Research Park with 40 presentations at scientific and technical meetings on SRS research.



ES4.1.5 Perform research and publish the results in peer-reviewed scientific literature to aid in making informed decisions.

USFS-SR concluded 26 research publications in fiscal year 2003.

Sixty ongoing research projects include the following topics:

- USFS-SR studied Red-cockcaded woodpecker colonization behavior to reduce costs and enhance the natural rate of population expansion, and habitat modeling in relation to timber harvesting strategies to ensure Endangered Species Act compliance.
- Monitored and assessed 16 Carolina bays to meet permit requirements and obtain banking credits to apply to closure projects at SRS.
- Inventoried and modeled vegetation to determine growth, harvestable forest products, wildfire fuel loadings, wildlife habitat and wood-based bioenergy potential for power generation.
- Studied smoke dispersion, plume behavior, and PM2 emissions to support air quality compliance and worker safety.
- Studied the effects of intensive nutrition and irrigation on forest plantation productivity, pest relationships, and water quality to support forest productivity, phytoremediation of wastes, and biofuel for energy.
- Studied the relationship between forest management activities and key wildlife resources such as large woody debris, soft and hard mast, and richness and abundance of native vertebrates.
- Provided recommendations for ecological strategies and methods to cost-effectively restore native hardwoods and fire savanna communities.
- Provided water balance modeling, monitoring and partitioning of tritiated water, and operational strategies for optimizing phytoremediation and phytoirrigation projects.

ES4.2.1 Continue habitat improvements to maintain or meet the recovery plan population objectives of endangered, threatened and sensitive species.

We conducted surveys of threatened and endangered plants on 2,576 acres, and managed for the endangered smooth purple coneflower by removing competing midstory and sprout vegetation.



We maintained and improved Red-cockaded woodpecker habitat by installing 37 cavity inserts, removing 298 acres of midstory vegetation, conducting 6,758 acres of prescribed fire, and identifying and treating 10 woodpecker recruitment clusters. The habitat now supports 45 groups of the endangered bird, up from one breeding pair in 1985.

ES4.2.2 Continue to restore native SRS habitats to improve ecosystem health and biodiversity.

USFS-SR enhanced biological diversity by establishing founder plant populations for savanna restoration with 15,000 plants of 19 species, and restoring 6 Carolina bays.

USFS-SR sold 31,010 hundred cubic feet of timber. We reforested 566 acres with native longleaf and loblolly pine, and improved timber stands and snag habitat (dead standing trees for wildlife) on 591 acres.

USFS-SR monitored habitat for 80 gopher tortises reintroduced b onto SRS in 2002.

ES4.2.3 Revisions to SRS Natural Resources Management Plan (NRMP) will be developed in cooperation with stakeholders.

USFS-SR conducted a natural resources planning program in accordance with DOE-SR guidance regarding land use plans and general management of DOE missions. An interdisciplinary team provided operational on-the-ground prescriptions for 15,701 acres consistent with the current Plan.

USFS-SR continues the cooperative stakeholder planning process for revising the NRMP.



CM1 Continue to excel in safety and health performance.

USFS-SR conducted a safety and environmental compliance and coordination program within the framework of Forest Service directives, the DOE-SR Integrated Safety Management System and International Standards Organization 14000. This included 5 facility inspections, and 39 project inspections, 8 contract prework conferences, and orientations for over 200 employees/cooperators/contractors. DOE-SR found no discrepancies in a recent audit of USFS-SR's Occupational Safety and Health Administration record-keeping 300 Log and accompanying accident reports for the last three years.

We provided six training courses for fire personnel, First Aid training for 40, and Hazwoper training for 16 personnel. USFS-SR also removed 259 feral hogs and 19 beavers from the site, 50 downed trees from roads, and conducted deer spotlight surveys that were used in determining appropriate harvest strategies for deer population control.

CM3.1.3 Maintain infrastructure systems in a safe and environmentally sound state of operational readiness.

USFS-SR maintained a comprehensive wildland fire program with a year-round initial attack capability of dedicated firefighting forces and equipment to protect natural resources and site improvements from wildland fire and smoke either from SRS or from fires that threaten SRS. We suppressed 16 wildfires on SRS, suppressed two wildfires originating off-site, and maintained firebreaks around 95% of the site



USFS-SR reduced hazardous fuel on 8,637 acres, through mechanical and prescribed fire methods.

USFS-SR managed the SRS secondary road and bridge system (except for bridge structural inspections), including inventory, planning, constructing, reconstructing, and maintaining all secondary roads. USFS-SR constructed 1.2 miles, and reconstructed 2.7 miles of road, for access to monitoring wells; we maintained 35 well roads. USFS-SR also reconstructed 72 miles, and constructed 2 miles of road for timber harvesting. USFS-SR also managed and maintained a multipurpose trails system following Forest Service standards. USFS-SR completed 27 miles of trail maintenance and 0.2 miles of trail construction



USFS-SR managed the SRS exterior boundary. The program included maintaining and protecting monuments and associated infrastructures and providing surveys and support to DOE-SR on trespass and easement issues. USFS-SR completed two site boundary repairs projects (20 miles of boundary fence maintenance and 17 miles of fence construction), and completed 22 miles of signage of the Savannah River/public road and stream crossings for no trespass and no fishing. USFS-SR provided environmental project engineering and construction requested by DOE-SR management.

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U.S. Department of Agriculture Forest Service-Savannah River (USFS-SR)

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